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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,090	03/08/2001	Antonio A. Avides Moreira	P 0278094 9780US	6854 15
909	7590	10/02/2003	EXAMINER	
PILLSBURY WINTHROP, LLP			PURVIS, SUE A	
P.O. BOX 10500				
MCLEAN, VA 22102			ART UNIT	PAPER NUMBER
			1734	

DATE MAILED: 10/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801,090

Applicant(s)

AVIDES MOREIRA ET AL.

Examiner

Sue A. Purvis

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewing in view of the admitted prior art and further in view of Danico (US Patent No. 4,560,083).

Stewing discloses heat shrink sleeves of thermoplastics which are individually injection molded, then stretched. As can be seen in Figure 6, the sleeve (11) is then in a relaxed state as it is ejected from the mold. The sleeve is considered to be at ambient temperature in the relaxed state. Ambient temperature as defined by the applicant is -40 deg C to 60 deg C.

Stewing does not disclose the thermoplastic as being a thermoplastic elastomer.

Applicant admits on page 1 of the specification that thermoplastic elastomers are known to be used in wide applications including shrink-on sleeving.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that the thermoplastic in Stewing is a thermoplastic elastomer, because it is known in the art to use a thermoplastic elastomer when making shrink-on sleeving.

Danico teaches that exposing the elastomeric material to an elevated temperature, allows the material to expand and create an effective seal

Art Unit: 1734

It would have been obvious to one having ordinary skill in the art at the time the invention was made to expose the component disclosed in Stewing in view of the admitted prior art to an elevated temperature once it is applied to the object in order to create a seal as shown in Danico. Furthermore, it is within the purview of the artisan to choose a temperature 20 degrees Celsius below the melting point, because the desire is to loosen the material for a proper seal, not to melt the material entirely.

3. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewing in view of the admitted prior art and Danico as applied to claim 1 above, and further in view of Schultze et al. (US Patent No. 6,001,464).

Stewing in view of the admitted prior art does not detail the type of thermoplastic used. Danico mentions some examples of elastomers, but does not limit to only those elastomers listed.

Schultze discloses that it is known that thermoplastic copolyetherester elastomers are suitable for seals as they are impermeable to water molecules, such as drops and create materials which are breathable, but waterproof. Schultze also discloses that thermoplastic polyurethanes belong to the class of thermoplastic elastomers. Furthermore, that thermoplastic elastomers are generally block copolymers of which the macroscopic property spectrums are a combination of the properties of the individual block -forming components.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a copolyether ester in the process of Stewing to create a component which is water impermeable thus better able to protect the cables or other articles which it is used for sleeving connections.

Art Unit: 1734

Regarding claim 13, Schultze also discloses a block copolymer, such as polyurethane, can be used.

4. Claims 3, 6, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewing (DE 35 23 771 A1) in view of the admitted prior art.

Stewing discloses shrink-on sleeves of thermoplastics which are individually injection molded, then stretched. As can be seen in Figure 6, the sleeve (11) is then in a relaxed state as it is ejected from the mold. The sleeve is considered to be at ambient temperature in the relaxed state. Ambient temperature as defined by the applicant is -40 deg C to 60 deg C.

Stewing does not disclose the thermoplastic as being a thermoplastic elastomer.

Applicant admits on page 1 of the specification that thermoplastic elastomers are known to be used in wide applications including shrink-on sleeving.

It would have been obvious to one having ordinary skill in the art at the time the invention was made that the thermoplastic in Stewing is a thermoplastic elastomer, because it is known in the art to use a thermoplastic elastomer when making shrink-on sleeving.

Regarding claims 15-17, the admitted prior art discloses that it is known to use thermoplastic elastomer materials in creating body plugs, gasket rings, and sealing rings as well as shrink-on sleeving. Therefore, it is within the purview of the artisan to use a process similar to that disclosed in Stewing which creates sleeving, to create body plugs, gasket rings, and sealing rings.

5. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewing in view of the admitted prior art as applied to claim 3 above, and further in view of Schultze et al.

Stewing in view of the admitted prior art does not detail the type of thermoplastic used.

Schultze discloses that it is known that thermoplastic linear copolyetherester elastomers are suitable for seals as they are impermeable to water molecules, such as drops and create materials which are breathable, but waterproof. Schultze also discloses that thermoplastic polyurethanes belong to the class of thermoplastic elastomers. Furthermore, that thermoplastic elastomers are generally block copolymers of which the macroscopic property spectrums are a combination of the properties of the individual block -forming components.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a copolyether ester in the process of Stewing to create a component which is water impermeable thus better able to protect the cables or other articles which it is used for sleeving connections.

Regarding claim 14, Schultze also discloses a block copolymer, such as polyurethane, can be used.

6. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewing in view of the admitted prior art as applied to claim 3 above, and further in view of Danico.

Stewing in view of the admitted prior art does not detail how the sleeves are used, only that they are used in connections with cables or wires.

Danico teaches that exposing the elastomeric material to an elevated temperature, allows the material to expand and create an effective seal

It would have been obvious to one having ordinary skill in the art at the time the invention was made to expose the component disclosed in Stewing to an elevated temperature once it is applied to the object in order to create a seal as shown in Danico. Furthermore, it is

Art Unit: 1734

within the purview of the artisan to choose a temperature 20 degrees Celsius below the melting point, because the desire is to loosen the material for a proper seal, not to melt the material entirely.

7. Claims 8, 12, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewing in view of the admitted prior art in view of Schultze as applied to claims 3 and 4 above, and further in view of Danico.

Stewing in view of the admitted prior art does not detail how the sleeves are used, only that they are used in connections with cables or wires.

Danico teaches that exposing the elastomeric material to an elevated temperature, allows the material to expand and create an effective seal

It would have been obvious to one having ordinary skill in the art at the time the invention was made to expose the component disclosed in Stewing to an elevated temperature once it is applied to the object in order to create a seal as shown in Danico. Furthermore, it is within the purview of the artisan to choose a temperature 20 degrees Celsius below the melting point, because the desire is to loosen the material for a proper seal, not to melt the material entirely.

Regarding claims 18-19, the admitted prior art discloses that it is known to use thermoplastic elastomer materials in creating body plugs, gasket rings, and sealing rings as well as shrink-on sleeving. Therefore, it is within the purview of the artisan to use a process similar to that disclosed in Stewing which creates sleeving, to create body plugs, gasket rings, and sealing rings.

Response to Arguments

8. Applicant's arguments with respect to claims have been considered but are moot in view of the new grounds of rejection.

9. Regarding applicant's assertion that the material in Stewing is actually a "thermoset", the examiner disagrees. Based on the readings from 'Thermoplastic Elastomers' by G. Holden et al., eds. (hereafter 'Holden') mentioned on page 2 of applicant's disclosure, the examiner has found that applicant's implication in their last response that since the material in Stewing was cross-linked, it could not be thermoplastic is untrue. Throughout Holden, cross-linking is mentioned as a feature in thermoplastic elastomers (TPEs). Of particular interest to the examiner was on page 576 where discusses how hard phased TPEs which have physical cross-linking.

Furthermore, if Stewing were a 'thermoset' material, then it would be indicated as such in the translation as the two different materials have clear differences which are recognized in the art. In using an online translation tool, the examiner has found that 'thermoset' translated to German is 'duroplast' (see <http://europa.eu.int/eurodicautom/Controller>). In addition, since the material in Stewing is for shrink-on sleeving, and 'thermoset' material cannot be re-shrunk as would be required by a shrink-on sleeving, this cannot be the case in Stewing. Also, the material in Stewing is to be used on a telecommunications cable, which implies a more flexible material, because cables are typically flexible.

10. Regarding applicant's arguments against the combination of Stewing in view of the admitted prior art, applicant's submission of the article regarding use of polyethylene as a materially commonly used for making shrink-on sleeving does not change that applicant admitted that it is known in the art to use thermoplastic elastomers when making shrink-on

Art Unit: 1734

sleeving. This use is also mentioned in Holden on page 593 under *16.3.2.1 Replacements for Vulcanized Rubber*. Based on the applicant's admission, and further based on Holden, it is within the purview of the artisan to create sleeving from a thermoplastic elastomer using the process of Stewing.

11. Applicant's claim fails to give any time frame for the "relaxing" in the claims 3 and 6, and furthermore, the claims do not require that the component only be relaxed at ambient temperature.

12. Regarding applicant's arguments against Danico, it is within the purview of one having ordinary skill in the art to know that shrink-on sleeving is used on wires/cables and this is disclosed in Stewing as well as mentioned in the admitted prior art. Thus, it would be within the scope of the artisan to look to find how to make an effective seal.

13. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is the combination of Stewing in view of the admitted prior art and Danico which were used to reject claims 1 and 7. In addition, once the sleeving is shrunk on the wire/cable there may be a desire by the artisan to expand the sleeving to fill in the space between the two wires/cables and complete the seal, thus the examiner disagrees that a practitioner would not be persuaded to look at Danico.

Furthermore, applicant's disclosure under Example I discusses that the heat treatment causes the body plug to expand. Based on newly submitted claim 18, the applicant is heat-treating a shrink-on sleeve which based on applicant's disclosure would cause the thermoplastic elastomer to

Art Unit: 1734

expand. Thus, applicant's reasoning for not using Danico in the process of Stewing in view of the admitted prior art is not consistent with their disclosure and newly submitted claims.

14. Applicant is reminded that it is the combination of Stewing in view of the admitted prior art which teaches using a thermoplastic elastomer. Schultze discloses that known thermoplastic elastomers include copolyetherester elastomers. The examiner does not consider it a far cry to use a known thermoplastic elastomer in the process of Stewing in view of the admitted prior art. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 1734

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue A. Purvis whose telephone number is 703-305-0507. The examiner can normally be reached on Monday through Friday 8am to 5pm.

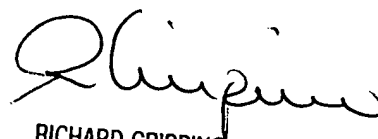
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rick Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-1495.



Sue A. Purvis
Examiner
Art Unit 1734

sp
September 22, 2003



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700